STATEMENT OF BASIS

Dal-Tile International, Inc.
Fayette, Alabama
Fayette County
404-0007

This proposed Title V Major Source Operating Permit renewal is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Dal-Tile's current Title V Major Source Permit will expire on October 29, 2011. Under the provisions of ADEM Admin Code R. 335-3-16-.12 major sources are required to submit applications for permit renewal at least six months but not more than 18 months, before the date of expiration. Dal-Tile's renewal application was due on April 29, 2011. The Department received Dal-Tile's renewal application on April 28, 2011.

Dal-Tile operates a ceramic quarry tile facility in the city of Fayette, Alabama. The facility is allowed to operate 8760 hours per year. Based on the Title V renewal application, this facility is a potential major source for Hydrogen Fluoride (HF).

The following are the significant sources of air pollutants at this facility:

- Tunnel Kilns
- Crushing and Screening Operation
- Storage Dryers
- Chemical Flashing Operation
- Extrusion and Cutting
- Feldspar Storage Silo

40 CFR Part 63 Subpart KKKKK – National Emission Standards for Hazardous Air Pollutants for Clay and Ceramics Manufacturing applies to clay ceramic manufacturing facilities that are considered a major source of HAPs. A major source of HAPs is defined as one that has the potential to emit 10 TPY of any one HAP, or 25 TPY of any combination of HAPs. Dal-Tile is considered a major source of HAPs. Since NESHAP Subpart KKKKK has been vacated there are no applicable NESHAPS.

Tunnel Kilns

The tunnel kiln operation consists of sources TK1 (Tunnel Kiln #1) and TK2 (Tunnel Kiln #2). Tunnel Kilns #1 and #2 each have a small stack (Emission Points 7 and 8) and share a combined large stack (Emission Point 9). Emissions of PM, SO_2, NOx, CO, VOC, HCl, and HF are generated from these sources. No control device is used to control emissions from these sources.

Emission Standards

Particulate Matter

Emissions of particulate matter from each kiln shall not exceed the lesser of 2.5 lb/hr or the allowable set by 335-3-4-.04.

$E=3.59(P)^{0.62}$ ($P < 30$ tons/hr)
Where E= Emissions in pounds per hour
P=Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(1)

ADEM Admin. Code R. 335-3-14-.04 (Anti-PSD)

These units shall burn natural gas only.

ADEM Admin. Code R. 335-3-14-.04 (Anti-PSD)

Opacity

This source shall not emit particulate matter of an opacity of more than one 6-minute average greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate matter emissions greater than 40%.

ADEM Admin. Code R. 335-3-4-.01

Expected Emissions

Emission Point #	Pollutant	Emission Rate	
		lb/hr	TPY
7, 8, & 9	PM[1]	2.97	13.0
7, 8, & 9	SO_2[1]	5.44	23.8
7, 8, & 9	NO_x[1]	3.68	16.1
7, 8, & 9	CO[1]	6.59	28.9
7, 8, & 9	HF[1]	4.18	18.3
7, 8, & 9	HCl[2]	1.06	4.64
7, 8, & 9	Other Haps[2]	0.63	0.28
7, 8, & 9	VOC[2]	0.15	0.66

[1] Emissions based on March 13, 2000 Stack Test
[2] Emissions AP-42 Emission Factors

Periodic Monitoring

Opacity and Particulate Matter

The facility shall perform a visual check once per week, of the stacks associated with these units.

If instantaneous visible emissions in excess of 10% opacity are noted from the Kilns (EP-7, EP-8,EP-9), maintenance inspections and/or corrective action to reduce the visible emissions are to be initiated within two (2) hours.

After the corrective action has been performed, the permittee shall conduct another visual check to ensure that the visible emissions have been reduced.

Stack observations, corrective action, and all maintenance records of each source permitted under this unit will be documented and available for inspection.

The Permittee shall submit a written report of exceedence of the stack opacity and any deviations from the work practice standards in 40 CFR Part 63 Subpart KKKKK or, if there were no deviations, a statement that there were no deviations from the work practice standards. The semi-annual reports shall be received within thirty (30) days of the end of each semi-annual reporting period.

The facility shall maintain records documenting the use of natural gas.

These units are not subject to CAM because a control device is not used to control emissions.

Crushing and Screening Operation

The crushing and screening operation consists of sources DP1 (Dry Pan Crushing- Line 1), DP2 (Dry Pan- Crushing Line 2), SC1 (Screening- Line 1), SC2 (Screening- Line 2), and CRH1 (Fired Scrap Crusher). Emissions of PM are generated from these sources. Emissions from Dry Pan Crushing and Screening Line 1 are controlled by Baghouse BH-1 (Emission Point EP-1). Emissions from Dry Pan Crushing and Screening Line 2 are controlled by Baghouse BH-2, and emissions from the Fired Scrap Crusher are controlled by Baghouse BH-3. Baghouses BH-2 and BH-3 share a common exhaust (Emission Point EP-2).

Emission Standards

Particulate Matter

Emissions of particulate matter from Baghouse BH-1 exhaust must not exceed the lesser of 3.0 lb/hr or the allowable set by 335-3-4-.04.

$E=3.59(P)^{0.62}$ ($P < 30$ tons/hr)
Where E= Emissions in pounds per hour
P=Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(1)

ADEM Admin. Code R. 335-3-14-.04 (Anti-PSD)

Emissions of particulate matter from Baghouse BH-2 and Baghouse BH-3 combined exhaust must not exceed the lesser of 3.0 lb/hr or the allowable set by 335-3-4-.04.

$E=3.59(P)^{0.62}$ ($P < 30$ tons/hr)
Where E= Emissions in pounds per hour
P=Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(1)

ADEM Admin. Code R. 335-3-14-.04 (Anti-PSD)

Opacity

Opacity from the exhausts of the baghouses is limited to 20%, as determined by a six-minute average. 20% may be exceeded once in a 60-minute period, but may not exceed that designated as 40%.

ADEM Admin. Code R. 335-3-4-.01

Expected Emissions

Emission Point	Pollutant	Expected Emissions	
		(lb/hr)	(TPY)
EP-1	PM	1.00	4.42
EP-2	PM	2.13	9.32

Emissions based on October 15, 1991 Stack Test

Periodic Monitoring

The following 40 CFR 64 Compliance Assurance Monitoring requirements apply to emission points EP-1 and EP-2 (See CAM Appendix):

An instantaneous observation of visible emissions from the baghouses associated with these units shall be accomplished weekly while in operation.

If the observed instantaneous opacity from is greater than ten (10%) percent, a visible emissions observation shall be conducted within thirty (30) minutes of the observation in accordance with 40 CFR 60 Appendix A, Method 9 for a minimum of twelve (12) consecutive minutes.

If the average opacity during the Method 9 visible emission observation exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours.

The facility shall inspect and clean each baghouse no less frequently than annually.

A properly maintained and operated device shall be utilized to measure the pressure differential (ΔP) across each baghouse.

Pressure drop (ΔP) across each baghouse shall be monitored and recorded daily while the units are operating.

If the observed pressure drop (ΔP) is less than three (3.0) inch of water or greater than six (6.0) inches of water, corrective action shall be initiated within two (2) hours.

If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation report. These records shall be maintained for a period of at least five (5) years from the date of generation and shall be made available to the permitting authority upon request.

Records of the observation date, observation time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions observation shall be kept in a permanent form suitable for inspection. These records shall be maintained for a period of at least five (5) years from the date of generation and shall be made available to the permitting authority upon

request.

Records of the observation date, observation time, emission point designation, emission point operation mode, name of the observer, observed pressure drop (ΔP), and any corrective actions taken during each pressure drop (ΔP) observation shall be kept in a permanent form suitable for inspection. These records shall be maintained for a period of at least five (5) years from the date of generation and shall be made available to the permitting authority upon request.

A semi-annual report shall be submitted to the Air Division within 60 days of the end of the six (6) month reporting period. This report shall contain the following:

These units are subject to CAM because pre-controlled emissions exceed major source threshold and a controlled device is used to meet an emissions limit.

Storage Dryers

The Drying operation consists of 18 dryers, sources Dry 1-18. There are three stacks associated with this operation (Emission Points 3-5). Emissions of PM, SO_x, and VOC are generated from these sources. No control devices are used to control emissions from these sources.

Emission Standards

Particulate Matter

Particulate Matter emissions from the storage dryers shall not exceed the allowable set by 335-3-4-.04.

$E=3.59(P)^{0.62}$ ($P < 30$ tons/hr)
Where E= Emissions in pounds per hour
P=Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04

Opacity

Opacity is limited to 20%, as determined by a six-minute average. 20% may be exceeded once in a 60-minute period, but may not exceed that designated as 40%.

ADEM Admin. Code R. 335-3-4-.01

Expected Emissions

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
3, 4, & 5	PM	0.43	5.65
3, 4, & 5	SO_x	0.06	0.79
3, 4, & 5	VOC	0.12	1.58

Emissions Based on AP-42 Emission Factors

Periodic Monitoring

Opacity and Particulate Matter

A visual observation of the emissions from each emission point associated with the sources permitted under the Storage Dryer operation will be required at least on a weekly basis. If any opacity greater than 10% is noted from an emission point, corrective action to eliminate the visible emissions must be taken within two (2) hours of the observed visible emissions.

Records documenting the visual inspections and any corrective action taken must be kept in a form suitable for inspection.

These units are not subject to CAM because a controlled device is not used to control emissions from these sources.

Chemical Flashing Operation

The Chemical Flashing Operation consists of sources CF1 (Chemical Flashing Station #1) and CF2 (Chemical Flashing Station #2). Emissions of PM, Manganese, and Cobalt are generated from these sources. A Wet Scrubber (Emission Point 6) controls emissions from these sources.

Emission Standards

Particulate Matter

Particulate Matter emissions from these units shall not exceed the allowable set by 335-3-4-.04.

$E=3.59(P)^{0.62}$ ($P < 30$ tons/hr)
Where E= Emissions in pounds per hour
P=Process weight per hour in tons per hour

ADEM Admin. R. 335-3-4-.04

Opacity

Opacity is limited to 20%, as determined by a six-minute average. 20% may be exceeded once in a 60-minute period, but may not exceed that designated as 40%

ADEM Admin. Code R. 335-3-4-.01

Expected Emissions

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
6	PM	0.02	0.09
6	Manganese	0.01	0.04
6	Cobalt	0.001	0.004

Emissions are based on 97.5% efficiency of the control device.

Emissions Monitoring

Opacity and Particulate Matter

A visual observation of the emissions from each emission point associated with the sources permitted under Chemical Flashing Operation will be required at least on a weekly basis. If any opacity greater than 10% is noted from an emission point, corrective action to eliminate the visible emissions must be taken within two (2) hours of the observed visible emissions.

A properly maintained and operated device shall be utilized to measure the pressure differential between the inlet and exhaust of the scrubber to determine if the pressure differential is within the manufacturer's recommended operating range. The pressure differential shall be checked on at least a weekly basis. Whenever a pressure differential is outside the manufacturer's recommended range, maintenance inspections and/or corrective action to bring the pressure differential within the manufacturer's recommended range are to be initiated within two (2) hours.

All air pollution control devices must be inspected and cleaned on at least an annual basis.

Source observation (including scrubber pressure differentials and visual observations), corrective action, and all maintenance records of each source permitted under this unit will be documented and available for inspection.

These units are not subject to CAM because pre-controlled emissions do not exceed major source thresholds.

Extrusion and Cutting
The extrusion and cutting operation consists of sources E1 (Extrusion Mill #1 and cutting) and E2 (Extrusion Mill #2 and Cutting). There are no stacks associated with these sources. Emissions of VOCs are generated from these sources. No control device is used to control emissions from these sources.

Emission Standards

Potential VOC emissions are less than 100 TPY. Therefore these units would not be subject to the allowable set by 335-3-6-.01.

ADEM Admin. R. 335-3-6-.01

Expected Emissions

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
F-E1	VOC	1.01	4.42
F-E2	VOC	1.01	4.42

Emissions based on Material Balance Calculations

Emissions Monitoring

VOCs

Based on the low expected levels of VOC emissions and the fact that no emission standards are currently established for these emissions from this process, periodic monitoring is not considered necessary.

These units are not subject to CAM because a controlled device is not used to control emissions from these sources.

Feldspar Storage Silo
This source consists of one feldspar storage silo. Emissions of PM are generated by this source. A Bin Vent (Emission Point FS) controls emissions from this source.

Emission Standards

Particulate Matter

Particulate Matter emissions from these units shall not exceed the allowable set by 335-3-4-.04.

$E=3.59(P)^{0.62}$ ($P < 30$ tons/hr)
Where E= Emissions in pounds per hour
P=Process weight per hour in tons per hour

ADEM Admin. R. 335-3-4-.04

Opacity

Opacity is limited to 20%, as determined by a six-minute average. 20% may be exceeded once in a 60-minute period, but may not exceed that designated as 40%

ADEM Admin. Code R. 335-3-4-.01

Expected Emissions

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
FS	PM	0.01	0.04

Emissions are based on 99% control efficiency of control device.

Emissions Monitoring

Opacity and Particulate Matter

This source shall be observed while being loaded at least weakly for visible emissions greater than 10%. Whenever visible emissions are observed to be greater than 10%, maintenance inspections and / or corrective action to reduce the visible emissions are to be initiated within two (2) hours, followed by an additional observation to confirm the emissions are reduced to normal.

Records documenting the visual inspections and any corrective action taken must be kept in a form suitable for inspection.

APPENDIX

40 CFR 64

Compliance Assurance Monitoring (CAM) Requirements

CAM Plan for Baghouses at Emission Points EP-1 and EP-2

	Parameter No.1	**Parameter No. 2**
I. <u>Indicator</u>	Visible Emissions (VE)	Pressure Differential (ΔP)
A. Measurement Approach	1. Trained and qualified personnel shall perform a weekly VE inspection. If instantaneous visible emissions in excess of ten (10%) percent opacity are observed, a visible emissions observation shall be conducted within 30 minutes in accordance with 40 CFR 60, Appendix A, Method 9.	1. A properly maintained and operated device shall be utilized to measure ΔP across each scrubber weekly. The device shall be located at eye level and be easily accessible for inspections by Air Division and plant personnel.
II. <u>Indicator Range</u>	1. While the unit is operation, an excursion is defined as an average opacity during the Method 9 visible emission observation which exceeds ten (10%) percent. 2. Excursions trigger an inspection, corrective action, and a reporting requirement. 3. Corrective action must be initiated within two (2) hours following an excursion.	1. While the baghouses controlling Crusher Lines No. 1 and Line #2 are operating, an excursion is defined as a ΔP of less than 3.0 inches H_2O. or greater than 6.0 inches H_2O. 2. Excursions trigger an inspection, corrective action, and a reporting requirement. 3. When a pressure drop excursion occurs, corrective action shall be initiated within two (2) hours to identify and correct the problem.

III. Performance Criteria		
A. Data Representativeness	1. Inspections shall be made at the baghouse. Visual observations performed at emission points (baghouse exhaust stack EP-1 & EP-2).	1. ΔP on gauge is the measurement of the pressure differential between inlet and outlet of the baghouse. The minimum accuracy of the device is ± 0.5 in. H_2O.
B. Verification of Operating Status	N/A	N/A
(1) QA/QC Practices and Criteria	1. Trained and qualified personnel shall perform the visible inspection.	1. The differential pressure gauge shall be calibrated annually. Pressure taps checked weekly for plugging.
C. Monitoring Frequency	1. Visible emissions observation shall be made weekly while each unit is in operation.	1. ΔP is measured daily while each unit is in operation.
D. Data Collection Procedures	1. Manual log entries based on weekly VE observation. Observation will be recorded along with the date, time, emission point designation, name of the observer, expiration date of observer's certification, observed opacity, and any corrective actions taken. An inspection and cleaning of baghouse shall be done at least annually. Any required maintenance shall be recorded and maintained on site.	1. Manual log entries based on gauge readings. ΔP will be recorded daily along with the date, time, and name of the observer.

E. Averaging Period	1. VE observations are instantaneous. If a Method 9 is required, then observations are a six (6) minute average.	1. ΔP readings are instantaneous.